



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TEXAS 75202-2733

July 31, 2012

MEMORANDUM

SUBJECT: Western berm inspection of armor cap at the San Jacinto River Waste Pits superfund site.

FROM: Valmichael Leos, Federal On-Scene Coordinator
Emergency Readiness Team (6SF-PE)

TO: File

I. PURPOSE

This memorandum is to document the observations of a site inspection conducted on July 24, 2012. The inspection was prompted by a notification letter sent to the EPA on July 23, 2012 via email by the respondents regarding erosion that had occurred at several spots of the western berm of the armor cap at the San Jacinto River Waste Pits superfund site.

II. BACKGROUND

In accordance with the operations, monitoring, and maintenance (OMM) plan for the San Jacinto River Waste Pits superfund site, the respondents are required to conduct quarterly cap inspections starting January 2012 for the first two years, semi-annually from years three to five, and annually after year five. In addition to the regularly scheduled cap inspections, impromptu inspections may be conducted if a major storm event occurs at or near the site that could adversely affect the protectiveness of the removal action.

The next quarterly cap inspection is scheduled in July of 2012. The results of the first two site inspections conducted in February and May 2012 were as follows:-

- Site security fencing visible, intact
- Site signage was visible, intact
- No evidence of trespassers (no one seen fishing at or surrounding waste pits)
- Cap observed to be in visually intact (no areas of cap erosion noted)
- Review of 1st and 2nd quarterly topographic surveys completed, no problematic areas needing cap repair or maintenance determined
- EPA requested for the removal of silt fencing along the TxDOT ROW that is not being utilized
- EPA requested for removal of fallen debris along the TxDOT ROW near I-10 (safety concern)

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The notification letter sent to EPA by the respondents on July 23, 2012 references a “reduction in the stone cover thickness” along the western edge. Upon completion of the EPA site inspection the following key points were noted:-

- No visible waste was observed to have been released above the water
- Several areas along the western berm have experienced bulging which is causing stretching of the geotextile fabric and LLDPE liner underneath
- Geotextile fabric and LLDPE liner that is exposed are observed to be in tact without any tearing or holes
- The western armor cap berm is still intact, but has experienced significant erosion due to unknown causes
- The RPs expect to have a repair plan submitted to EPA by Friday July 27, 2012 for review and approval
- The repair will involve a larger gradation of rock and is estimated to be completed in 2 to 3 business days from date of plan approval

III. CONCLUSIONS

Although no visible waste was observed to have been released above land, further investigation is recommended underwater and immediately adjacent to the western berm to ensure cap integrity. It has also been observed that the western berm has experienced bulging. This bulging may have occurred during the construction phase of the cap placement from heavy equipment that may have inadvertently changed the geometrical shape of the berm. The armor cap erosion along the western berm has exposed the geotextile fabric that provides the protective layer from the waste underneath.

The fabric exposure along with areas of the western berm that have experienced bulging has raised concerns about the cap’s structural and environmental effectiveness. During the inspection it was observed that none of the areas of exposed geotextile fabric had any tears, but concerns remain about effectiveness due to the fabric stretching caused by the underlying waste bulging underneath.

Review of the cap repair plan submitted has noted the change to a more dense armor cap material C instead of B/C to repair the western berm. This design / construction change requested has raised concerns about the overall effectiveness of the cap design and quality of construction. In response to this concern, EPA will be conducting a third party review of the overall cap design and construction. Moreover, EPA is requesting the respondents conduct a reassessment of the overall cap design and construction and submit a detailed report about the western cap failure.

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Picture 1:- View of western berm erosion with exposed geotextile fabric



Picture 2:- Close up picture of exposed geotextile fabric

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Picture 3:- View of OSC Leos standing next to berm illustrating extent of cap erosion